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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO.
09 631,638	08 02 2000	Kevin M. Moore	1533.0980001 SRL PAJ	8662

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EXAMINER

NAFF, DAVID M

ART UNIT	PAPER NUMBER
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1651

DATE MAILED: 08/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/071,638	Applicant(s) Moore et al
Examiner Haff	Group Art Unit 1657

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 6/18/02
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-7 + 9-31 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-7 + 9-31 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

The amendment of 6/18/02 has been entered. The amendment canceled claim 8 and amended claims 1, 5-13, 16, 17, 21-28 and 31.

Claims examined on the merits are 1-7 and 9-31 which are all claims in the application.

5 The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7 and 9-31 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the
10 relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 1 (line 6) and 17 (line 7) and where recited in other claims, "non-organic acid" is not adequately supported in the specification. This term is not recited in the specification, and is not
15 an art recognized term for describing an acid. It is suggested that the claims recite "inorganic" which is art recognized for an acid that is not organic.

Claims 1-7 and 9-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and
20 distinctly claim the subject matter which applicant regards as the invention.

In claims 1 (line 6) and 17 (line 7) and where recited in other claims, "non-organic acid" is uncertain as to meaning and scope. The term is not recited and defined in the specification, and is not an art
25 recognized term for defining an acid. It is suggested that "inorganic"

be recited instead which is art recognized for acids that are not organic.

Claims 1-7 and 9-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dumpelmann et al (5,852,211) in view of Bott et al (0
5 174 624) for the type of reasons set forth in the previous office action of 3/18/02, and reiterated below.

The claims are drawn to recovery of an organic acid from a fermentation broth by drying the broth to produce a dried product, adding the dried product to a lower alcohol in the presence of an acid and
10 removing insolubles by to obtain the organic acid. The organic acid can be 2-keto-L-gulonic acid and the acid present when the dry product is added to the lower alcohol can be sulphuric acid.

Dumpelmann et al disclose a process for obtaining 2-keto-L-gulonic acid (KGA) from a fermentation solution containing the sodium salt of 2-
15 keto-L-gulonic acid (NaKGA) that results from neutralization. The process involves crystallizing the sodium salt (NaKGA) and separating the resulting crystals from the fermentation solution, suspending the NaKGA crystals in a lower alcohol acidified to a pH of about 1.5 to about 3.5 with an acid such as sulphuric acid where the acid is converted to an
20 insoluble sodium salt and the NaKGA is converted to free KGA, and removing the insoluble sodium salt of the acid to obtain an alcoholic solution of the KGA. Afterwards, the free KGA may be esterified by alcohol of the alcoholic solution in the presence of a catalytic amount of acid to obtain an alkyl ester of the KGA. For example, see col 4,
25 lines 10-33, and Examples 1-3.

Bott et al disclose producing alkyl lactate esters by filtering a crude fermentation mixture containing calcium lactate, spray drying the resulting filtrate to obtain solid calcium lactate, reacting the solid calcium lactate with an alcohol in the presence of an acid that forms a water-soluble calcium salt and isolating the lactic acid ester formed.

It would have been obvious to omit crystallizing NaKGA in the process of Dumpelmann et al and instead filter the fermentation solution, dry the resulting filtrate and react the dried filtrate with the lower alcohol in the presence of acid as suggested by Bott et al using steps of filtering and drying a fermentation solution without crystallizing in the production of a lactic acid ester from a fermentation mixture containing a calcium salt of the lactic acid. Filtering and drying without crystallizing would have been expected to simplify the process of Dumpelmann et al, and such simplification would have been motivation to use filtering and drying in place of crystallizing and separating the crystals.

Applicant's arguments filed 6/18/02 have been fully considered but they are not persuasive.

Applicants point out that it was surprising and advantageous that the fermentation broth could be dried to obtain a free-flowing powder. However, drying a fermentation broth is not surprising since Bott et al disclose spray drying a fermentation broth, and it appears the spray dried broth is free-flowing.

Applicants argue that the claims do not require removing insolubles by filtration as in Bott et al. However, the claims do not exclude

filtering the broth before drying. In fact, the specification discloses (page 7, lines 20-22) that insoluble material can be removed from the broth before drying. Further see Example 2 (page 11) where the broth is ultrafiltered to remove cell solids before drying.

5 Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set
10 to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed,
15 and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications
20 from the examiner should be directed to David M. Naff whose telephone number is (703) 308-0520. The examiner can normally be reached on Monday-Thursday and every other Friday from about 8:30 AM to about 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, a
25 message can be left on voice mail.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn, can be reached at telephone number (703) 308-4743.

The fax phone number is (703) 872-9306 before final rejection or
5 (703) 872-9307 after final rejection.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

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Sam. V/A
1057

DMN
8/23/02